

ABSTRACT

A Cu film is deposited on a substrate by ALD (Atomic Layer Deposition) process, in which: a Cu-carboxyl acid complex or a derivative thereof having a high vapor pressure and wettability to a base is used in a gasified state; H₂ is used as a reductive gas; and a step of adsorbing a source material gas to a substrate and a step of forming a Cu film by reducing the adsorbed gas with a reductive gas are repeated alternately. With this method, a conformal Cu film having excellent quality can be formed.